

*hilliana* but to a wealth of similar material in the great collection which Hemphill assembled. He seems to have distributed duplicates rather sparingly and these were selected from his poorer specimens. His field work resulted in the discovery of a great number of new species, many of which are represented only by a few known specimens, as in the case of this *Lymnaea*. In almost every case, however, he retained a good series of his best specimens for his own collection. This is now available for legitimate study and research in the California Academy of Sciences.

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PLEISTOCENE FRESHWATER MOLLUSKS FROM NORTH CENTRAL TEXAS

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BY G. DALLAS HANNA

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Through the kindness of Dr. J. A. Udden, Director of the Bureau of Economic Geology and Technology of the University of Texas, I have recently had the opportunity to study interesting and well-preserved freshwater fossil mollusks from Wilbarger County, North Central Texas. The material was collected by Mr. E. B. Stiles, Petroleum Geologist.

Locality 1. *Pomatiopsis lapidaria* (Say).

The fossils came from greenish white clay covered by 20 feet of sandy shale; one mile north of Pease River,  $4\frac{1}{2}$  miles N. E. of Vernon, Wilbarger County, Texas; elevation 1214 feet; Sec. 25, Blk. 12.

Locality 2. *Planorbis trivolvis* Say.

*Physa gyrina* Say.

*Lymnaea catascopium* (Say).

*Lymnaea palustris* (Muller)

The fossils came from greenish clay directly overlying Permian rocks; south bluff of Red River, N. E. Cor. Sec. 42, Blk. 12, north of Vernon, Wilbarger County, Texas; elevation 1210 feet.

The formation from which these shells came is a Pleistocene lake deposit of very considerable extent which has been

named "Seymour beds" by Cummins.<sup>1</sup> Vertebrate fossils have been found in it but this appears to be the first record of mollusks.<sup>2</sup> Several of the species are of decidedly northern habitat at the present time and the finding of them in Texas goes further to show the southward extension of the Hudsonian fauna during the Pleistocene.<sup>3</sup>

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ON THE IDENTITY OF *SAXIDOMUS BREVISIPHONATUS* CARPENTER

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BY J. R. LEB. TOMLIN

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In 1902, in his "Synopsis of the Family *Venerida*,"<sup>4</sup> Dall wrote that this species had never been collected since it was described from the Vancouver region.<sup>5</sup>

As a matter of fact, Carpenter says: "Hab.: ? Vancouver, ? Japan (Mrs. Cuming). The shell was sent me as from Dr. Forbes' Vancouver collections and is so quoted in the British Association Report for 1863, p. 607, but Mr. Cuming subsequently stated his belief that it came from Japan."

Mr. Cuming's belief was perfectly correct. Whilst overhauling the *Venerida* in the British Museum recently I came across the specimen described by Carpenter, its identity being established by pencilling both on the back of the tablet and on the inner side of the valves of the shell. It is in poor condition and somewhat imperfect, but recognizable at a glance as *Macrocallista chishimana* Pilsbry.<sup>6</sup>

<sup>1</sup> Cummins, W. F., *Fourth Ann. Rept., Pt. 1, Geol. Survey*, 1892 [1893], pp. 181-190.

<sup>2</sup> See Gordon, *U. S. Geol. Survey, Water Supply Paper*, 317, 1913, pp. 30-31, 58-59.

<sup>3</sup> See "A Pleistocene Molluscan Fauna from Phillips County, Kansas," *Univ. Kansas Sci. Bull.*, Vol. VII, No. 3, 1913, in which a similar southward extension of land snails is discussed by Hanna & Johnston.

<sup>4</sup> *Pr. U. S. Nat. Mus.*, xxvi, 408.

<sup>5</sup> *Pr. Z. S.* 1865, 203.

<sup>6</sup> *Pr. Ac. N. Sc. Philada.* 1905, p. 118.